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THE CENTER LINE

MONTANA HIGHWAY COMMISSION

Vol. VII., No. 3. March, 1964

Front Row—(left to right, kneeling): Robert G. Chapman, Floyd D. Strickler, George A. Barrett, Edward J. Reiser, Harold G. Heath.

Second Row—(left to right): William J. Steele, Larry D. Clinton, Billy C. Ford, Lester E. Engen, Charles H. Code, Harry L. Waltenbaugh, Robert L. Craig, Richard L. Miller.

Back Row—(left to right): James L. Townsend, James J. Brooks, Larry O. Williams, Rolland C. Hebel, Richard W. Saltzman, Gunwald Brenden, Jr., Martin J. Kolence, Allen B. Bruner, Thomas L. Watt, Gilbert L. Jackson, Vern B. Shriver.

The above picture represents the Bozeman Division No. 10, 1964 Centennial version of the bearded Vigilantes who by day and night patrol the Bozeman Trail from Reed Point area to Bozeman and Freight Line Trail from Bozeman to Virginia City and Alder Gulch, along with other squaw-men having their tepees pitched along this route, that could not be contacted for this picture.

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Tim Babcock

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Letting of February 26, 1964

Project No.	Amount	Bidder	Address
I-IG 15-2(18)131 U1 Butte-North Road Silver Bow County	$ 2,640,783.58	F & S Contracting Co.	Butte, Mont.
I-IG 15-2(18)131 U2 Butte-North (Fencing) Silver Bow County	$ 15,225.60	Sletten Const. Co.	Great Falls, Mont.
I 15-4(6)186 U5, I 15-4(9)194 U3, I 15-4(12)207 U3, I-IG 90-6(2)309 U3, F 191(19) U2 & S 2(15) U2 Helena-N., Helena Hill-Sieben, Sieben N.&S., Rocky Canyon, Pablo-Kalispell and the Lake Helena-West (Seal) Lewis & Clark, Gallatin & Flathead Counties.	$ 148,226.36	Francis M. Tindall	Lewistown, Mont.
I 90-1(24)54 Superior-East (Bridge) Mineral County	$ 449,454.72	N. A. Nelson Const. Co.	Sheridan, Wyo.
I-IG 90-1(26)66 Tarkio-East (Bridges) Mineral County	$ 302,221.21	Waddell Const. Co.	Helena, Mont.
F 50(10) & F 267(13) Rogers Pass-Simms & Ovando-Rogers Pass (Surfacing) Lewis and Clark County	$ 243,943.85	S. Birch, Inc.	Great Falls, Mont.
F 157(16) U3, S 68(5) U2 & S 259(2) U2 Miles City-Jordan, Hilger-Winifred, Big Sandy & the Rosebud-Cartersville-East (Seal) Custer, Fergus and Rosebud Counties.	$ 51,983.83	Asphalt Paving Co.	Billings, Mont.
F 238(8) U3, S 131(3) U2 & S 339(9) U2 Wolf Creek-Augusta, Brady-East & the Ft. Benton-Chester (Seal) Lewis & Clark, Pondera and Liberty Counties	$ 47,504.46	Missoula Paving Co.	Missoula, Mont.
SG 192(5) Kings Ave.-Road West (Bridge) Yellowstone County	$ 120,205.84	Cop Const. Co.	Billings, Mont.

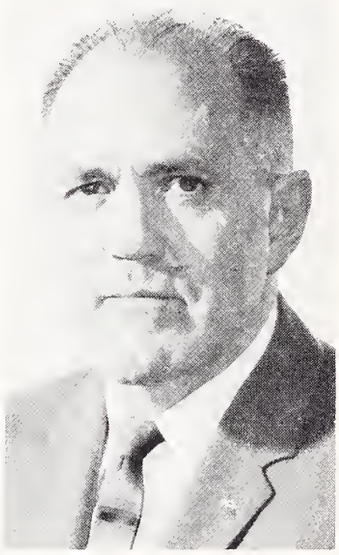
LAST CALL ! LAST CALL !

ANNUAL BOWLING TOURNAMENT

On April 18 and 19, a lot of Highway men are going to get together to bowl to see if the trophy goes again to Eastern Montana in Circle or Miles City, and it looks like there is going to be lots of fun connected with the tournament. It's not too late to get your reservation in. The site of the tournament will be Little's Lanes, and entries can be made by sending them to Box 1359, Great Falls, Montana.

Let's make this the biggest and best Highway Tournament yet.

Several important administrative changes were made by the Highway Commission at the February meeting, and it is expected that these changes will do much to bolster effectiveness, provide for continuity, and lessen the work load of key engineers.



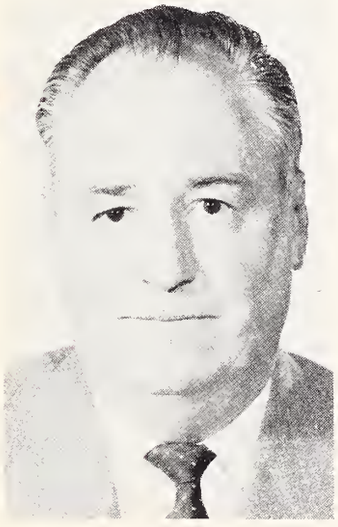
Don DeVore, formerly serving as Technical Engineer, has been promoted to Deputy State Highway Engineer. Don has been with the Department for 35 years having started his highway assignment as a rodman in Billings. Don's story is one of individual determination to advance in his chosen field. Never afraid of work, he started early as a youngster in Billings to help the family, when he obtained a paper route for the Billings Gazette, and on his own initiative, he later started a rural paper route. He also bolstered his income by delivering Western Union Telegrams, and running his own delivery service.

When the war shut down most highway projects, he enlisted in the Merchant Marine on a freighter to obtain passage to an engineering job in the Middle East, but when his ship was torpedoed, he was sent to Port Au Spain in Trinidad to recover from his injuries.

Upon his complete recovery, he enlisted in the Seabees, and saw duty in Cuba and in the South Pacific. He was discharged with the rate of Chief Petty Officer, and returned to the Highway Department. He was transferred to Great Falls in August of 1945, and became District Maintenance Engineer there in 1949. In 1950, he became Division Con-

struction Engineer, and in 1956, he was transferred to Helena as Senior Construction Engineer, and shortly thereafter, he became Technical Engineer.

One of Don's fabulous experiences happened in 1938, when the call of adventure prompted him to accept a job in Columbia in the heart of the wild Matalone Indian country to survey a pipe line for the South American Gulf Oil Co. The jungle was dark, and everything that flew or crawled, according to Don "wanted to bite or sting you," and the Matalones' resented the presence of the survey crew. The crew was ambushed one day, with several of them killed, and Don had to hoof it back to civilization on his own. It was shortly thereafter that he decided on a more sedate life, and he was married to Louise. They have two boys, Donald, who is a sophomore at Montana State College, and Ricky, a 9th grader at Helena Junior High.



Grover Powers,who came to the Montana Highway Department in 1956 from the Ohio Turnpike Commission, can almost be called a Montana native, as he was born and raised in the area immediately adjacent to Montana, in Northern Wyoming. He has relatives in Sheridan, and his folks were in the cattle business in that area.

His education includes work at the University of New Hampshire, and at the University of Wyoming, where he obtained his degree in Civil Engineering. He worked for the Bureau of Reclamation for four years; the Wyoming Highway Department for seven years; the U. S. Engineers for one year, and worked for a time with Peter Kiewit Sons Co. in the construction of an Atomic Energy Plant in Ohio.

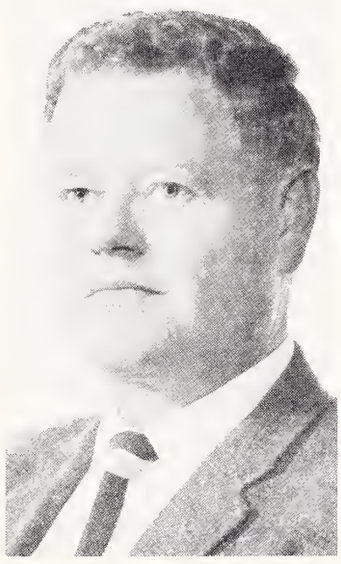
Grover served with distinction as a navigator in the 8th Air Force, and was discharged as a 1st Lieutenant.

His first job with the Montana Highway Department was as Special Assignments Engineer, later being promoted to Interstate Engineer.

His new assignment will be as assistant to Cliff Thompson, the Pre-Construction Engineer.

Grover is very active in youth work, and in his church, serving for a two-year term as District Chairman of the Prickly Pear Boy Scout District, and as Lay leader of the Baptist Church in Helena. He is presently serving his second term as President of the Baptist Men of Montana.

Grover and Ada's children are all married, with Bruce working for the Bureau of Land Management in Phoenix; Gloria married to Bob Jones, who is with the Montana Standard in Butte, and George, who is a new 2nd Lt. in the Army, stationed in Germany.



Arthur Quinnell, a fourth generation engineer, assumed the duties of Interstate Engineer on March 1, succeeding Grover Powers. He is the son of Fred Quinnell, Jr., State Highway Engineer, and the grandson of Fred Quinnell, Sr., who was highly respected as City Manager of Bozeman for many years, and previous to that, City Engineer of Roundup.

Arthur obtained his education in the typical manner of a son of an up and coming Highway Engineer. He was born in Miles City, and went to school in Miles City, Glendive and in Butte, as his dad progressed up the ladder.

He served in the Naval Air Corps in 1945 and 1946, then attended college at Montana School of Mines, Colorado College, and thence coming back home to obtain his degree in Civil Engineering at Montana State College in 1950. He worked as a construction foreman for Peter Kiewit and Sons for two years,

and then came to the Montana Highway Department.

Arthur is active in the American Society of Civil Engineers ,the Highway Research Board, and the AASHO committee on electronics and photogrammetry.

Art married Shirley Cosens of Bozeman, and they have twin boys, Dave and Dan, who are now 11 years old, and Don who is now 9.

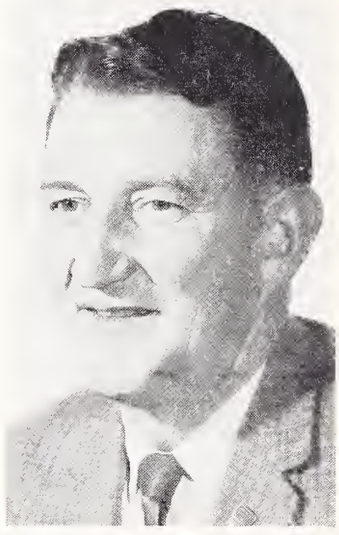
The newly appointed Training-In-Service Engineer, is a Montanan by choice, having come west in the summer of 1948 to visit his brother, Rev. A. J. Walsh in Forsyth, and liked it out here so well that he obtained a job as a gravel checker in Lame Deer with the Department, then decided to make his home in Montana.

John J. Walsh, who assumed the duties of training and recruiting on March 1, replaces Robert Champion, who has been moved up to an assistant to the State Highway Engineer.

John continued working for the Department during the summer, while pursuing his studies during the winer. He graduated from the College of Great Falls with a degree in Mathematics in 1951, and briefly thereafter he sold Oldsmobiles for Schroeder Olds in Great Falls, and that fall went to Circle to teach Math and Science in the High School. In 1953, he moved to Dutton to teach the same subjects.

His recollections of highway work recalled him to that work in the summer of 1955 and 1956, when he worked for McLaughlin Construction Co. and for Naranche and Konda, and in the fall of 1956, he returned to the Highway Department as an Engineering Aide in Belgrade. By this time, he decided he would go all the way with the Department, and so entered Montana State College's School of Engineering, and worked for the Bridge Department in Helena in the summers. He obtained his degree in Civil Engineering in 1958, and returned immediately to Helena as a bridge designer. The desire to teach never quite left him, and up until his recent appointment, he has been teaching night school mathematics at Carroll College.

He and his wife, Catherine, have three children.



In order to better co-ordinate the Helena Construction Engineer's office with the more than 150 projects in the field, and to provide better inspection, and keep field engineers up to date on specifications and administrative changes, two men have been added to Construction Engineer Lehman Fox's staff.

The first, whose appointment was effective March 16, is William J. Purvis, who is currently a designer in the Traffic Engineer's office.

Purvis is a relative newcomer to the Montana Highway Department, but is highly qualified as an engineer, having served as City Engineer to the City of Billings for three years, and previous to that time, as an engineer with Wenzel and Co. of Great Falls. He also was with the Atomic Energy Commission at a radiation lab in Nevada.

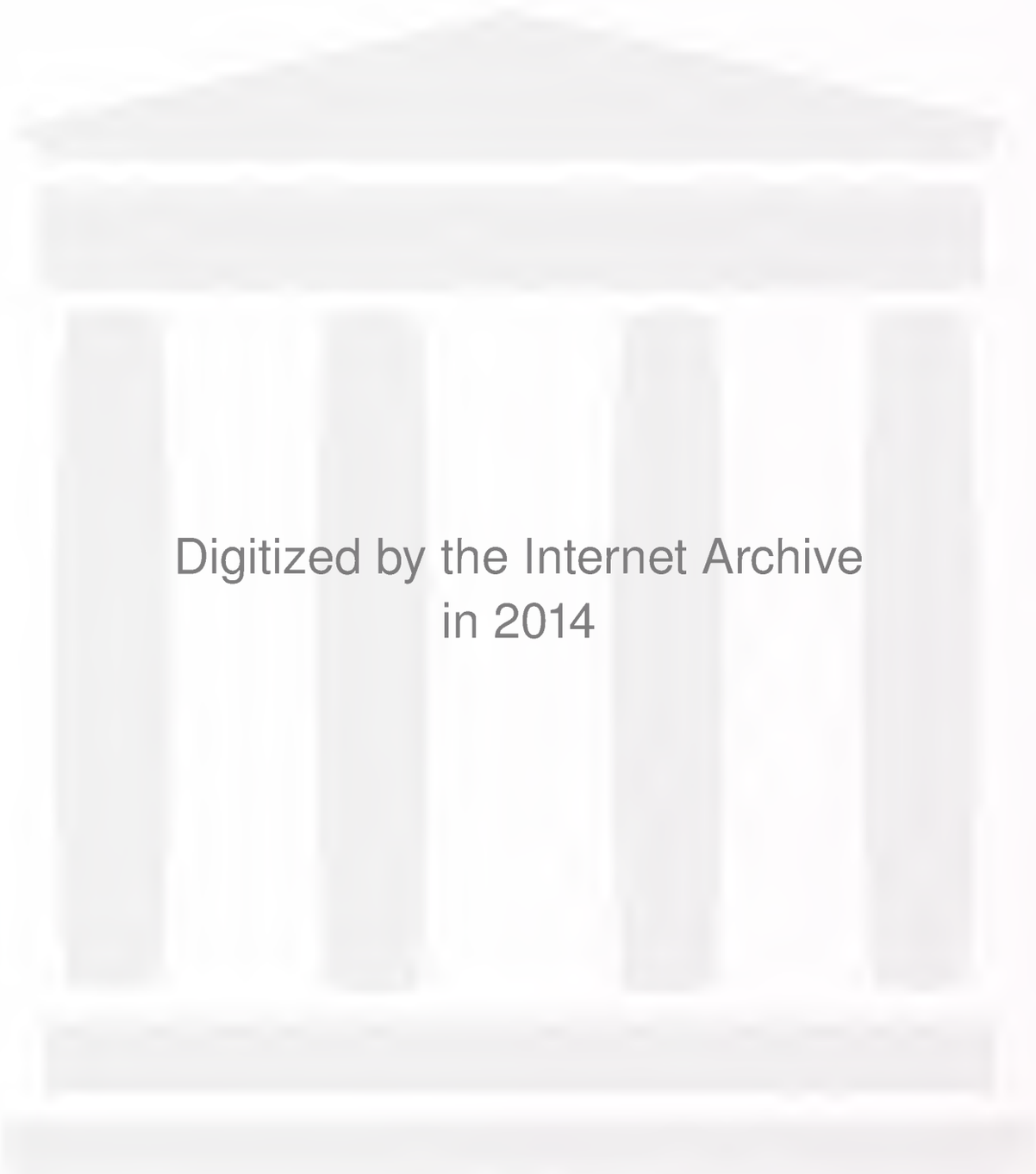
His education was obtained at Sun River Grade School, Simms High School, and Montana State College, where he obtained a degree in Civil Engineering in 1949.

His education was interrupted by the war, and Bill was in the service for five years, with three years overseas with the Air Force. His class was the first to graduate under the GI Bill. Bill is active in Engineering organizations, the Elks Lodge and the Congregational Church.

He and his wife, Betty, have a son, Robert, who is a junior at Helena High School.

MAP INDEX NUMBER	PROJECT NUMBER	PROBABLE COMPLETION DATE	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
	FEDERAL AID PRIMARY PROJECTS		
101	F 33 (6) & F 108 (9)	9-30-64	8.0 miles grade, drain, aggregate & plant mix bituminous surface. (U. S. 87 - S. of Roundup).
102	F 50 (10) & F 267 (13)	10-15-64	9.2 miles aggregate & plant mix bituminous surfacing. (Montana 20 - E. of Lincoln).
103	F 152 (7) U 2	8-31-64	One 213-ft. prestressed concrete beam bridge-Milk River. One large structural plate pipe - Indian Service Irrigation Canal. (U. S. 2 - S. of Harlem).
	F 193 (13)	5-15-64	11.6 miles grass seeding. (Montana 16 - Medicine Lake N.).
[illegible]	F 135 (18)	5-15-64	0.6 miles seeding & mulching. (U. S. 10 - W. of Miles City).
106	F-FG 68 (12) U 1	9-1-64	2.7 miles (four-lane divided) grade, drain, surface, plant mix bituminous surface. Signing & delineation. (U. S. 10 A - East of Anaconda).
	F-FG 68 (12) U 2	5-15-64	Four prestressed concrete beam bridges, dual 70-ft.-Clark Fork & dual-148-ft.-NP RY. (U. S. 10 A - East of Anaconda).
	ROW-F-FG 68 (8)	5-15-64	2.7 miles fencing. (U. S. 10 A - E. of Anaconda).
107	F 134 (6)	9-30-64	0.7 miles grade, drain, surface & plant mix bituminous surface. (U. S. 212 - Laurel S.).
108	F 219 (18)	6-15-64	0.2 miles grade, drain, aggregate & plant mix bituminous surface. One 65-ft. prestressed concrete beam bridge-Rattlesnake Creek. (U. S. 10 - In Missoula).
109	F 144 (8)	5-15-64	4.7 miles grass seeding. (U. S. 2 - Glasgow E.).
111	F 149 (19) & F 252 (15)	9-15-64	9.8 miles grade, drain, surface & plant mix bituminous surface. (U. S. 87 - S. W. of Fort Benton).
112	F 191 (24)	8-31-65	5.9 miles grade, drain, aggregate & plant mix bituminous surfacing. (U. S. 93 - S. of Kalispell).
	F 191 (19) U 2	9-15-64	5.5 miles seal coat oiling. (U. S. 93 - S. of Kalispell).
113	F 217 (11)	10-15-65	9.2 miles grade, drain, aggregate & plant mix bituminous surface. Relocate portion of NP RY tracks. (U. S. 89 - S. of Livingston).
114	F 245 (16)	10-30-64	5.3 miles grade, drain, aggregate & plant mix bituminous surface. One 112-ft. prestressed concrete beam bridge - Deer Creek. (Montana 16 - N.E. of Glendive).
115	U FG 228 (16)	5-15-64	1.5 miles grade, drain, cement stabilized base, surface, concrete pavement, plant mix bituminous, seal coat oil. One concrete underpass - NP RR. (U. S. 10 - In Billings).
	F 228 (19) U 1	9-1-64	0.6 miles grade, drain, aggregate & plant mix bituminous surface. Signing & delineation. (U. S. 10 - West Billings Interchange).
	F 228 (19) U 2	9-1-64	0.6 miles fencing. (U. S. 10 - West Billings Interchange).
	F 228 (21)	5-31-64	1.5 miles signing, signals & lighting. (U. S. 10 - In Billings).
116	F 264 (8)	10-31-64	6.4 miles grade, drain, aggregate & plant mix bituminous surfacing. (U. S. 12 - Townsend E.).
117	F 157 (16) U 3	9-15-64	5.0 miles seal coat oiling. (Montana 22 - N.W. of Miles City).
118	F 149 (20)	6-30-64	0.4 miles signing & delineation. (U. S. 87 - N. of Great Falls).
	F 395 (3) & F 395 (5)	6-30-64	1.5 miles signing & delineation. (14th & 15th St. - In Great Falls).
119	F 235 (25)	5-15-64	7.6 miles grade, drain, surface, plant mix bituminous surface. One-81-ft. prestressed concrete beam bridge-Otter Creek. (U. S. 87 - W. of Stanford).
	F 235 (31)	5-15-64	4.0 miles plant mix bituminous surface. (U. S. 87 - W. of Stanford).
120	F 114 (5)	9-1-64	2.4 miles grade, drain, surface & plant mix bituminous surfacing. (Hysham Connection to Interstate).
121	F FG 219 (16) U 1	5-15-64	9.8 miles grade, drain, surface & plant mix bituminous surfacing. (U. S. 10 A - N. W. of Missoula).
	F 219 (19)	5-15-64	9.8 miles seeding & mulching. (U. S. 10 A - N. W. of Missoula).
122	F 9999 (1)	5-15-64	119 miles signing. (U. S. 10, 10 A, & 93 - Missoula to Kalispell).
123	F 191 (20) U 1	5-15-64	7.3 miles (2.5 miles grade & drain) surface, plant mix bituminous & seal coat oiling. (U. S. 93 - N. of Polson).
124	F 246 (13)	11-15-64	9.2 miles grade, drain, aggregate & plant mix bituminous surfacing. (Montana 20 S - S. E. of Circle).
125	F 249 (15)	5-15-64	0.6 miles grade, drain & slide area stabilization. (U. S. 12 - E. of Garrison).
126	U 227 (6) & F 388 (6)	5-15-64	2.6 miles street widening, curbs, plant mix bituminous surfacing, traffic signals & signing. (10th Avenue S ByPass-In Great Falls).
	F 388 (7)	6-30-64	0.6 miles highway lighting. (10th Avenue S. - In Great Falls).
127	F 184 (15)	5-15-64	1.1 miles seeding & mulching. (U. S. 10 N. of Deer Lodge).
128	ERFO 41 (1)* *	1964	1.0 miles grade, drain, aggregate & plant mix bituminous surfacing. One 36-ft. concrete slab bridge - Cougar Creek. (U. S. 191 - N. of W. Yellowstone).
129	F 238 (8) U 3	9-15-64	8.5 miles seal coat oiling. (Montana 287 - N. of Wolf Creek).
133	F 153 (9)	5-15-64	9.0 miles grass seeding. (U. S. 2 - E. of Dodson).
134	F 176 (7)	7-30-64	5.3 miles grade, drain, surface & plant mix bituminous surfacing. (Montana 20 - E. of Simms).
138	F 210 (3)	5-15-64	6.0 miles plant mix bituminous surfacing. (U. S. 89 - N. W. of Browning).
	F 227 (5)	5-15-64	4.0 miles plant mix bituminous surfacing. (U. S. 89 - N. E. of Browning).
	F 227 (6)	5-15-64	4.3 miles grade, drain, surface, & plant mix surfacing. (U. S. 89 - N. W. of Browning).
139	FHP 13-3 (1)*	1964	4.1 miles grade, drain & base. One 60-ft. reinforced concrete bridge-Bear Creek. One 26-ft. concrete slab bridge-Devil Creek. (U. S. 2 - S. E. - E. Glacier).
140	F 209 (4)	9-15-64	5.5 miles grade, drain, aggregate & plant mix bituminous surface. Four 20-ft. concrete bridges. (U. S. 191 - W. of Bozeman).
141	F 86 (22)	5-15-64	0.8 miles seeding & mulching. (U. S. 10 - S. W. of Miles City).
142	F 315 (17)	5-15-64	12.0 miles grass seeding. (Montana 24 - S.E. of Fort Peck).
	F 315 (18)	5-15-64	11.4 miles grass seeding. (Montana 24 - S. E. of Fort Peck).
145	F 157 (19)	7-15-64	10.9 miles, grade, drain, surface, & plant mix bituminous surface. Widen one-164-ft.-Concrete T Beam bridge to 28-ft. roadway S. Fork Sunday Creek. One 122-ft.-prestressed concrete beam bridge- N. Fork Sunday Creek. (Montana 22 - N.W. of Miles City).
	FEDERAL AID SECONDARY PROJECTS		
201	S 311 (5)	8-31-64	0.9 miles grade, drain, aggregate & road mix bituminous surface. One 213-ft. prestressed concrete beam bridge-Milke River (S. of Chinook).
202	S 58 (6)	8-31-65	1.1 mile grade, drain, aggregate & plant mix bituminous surface. One 650-ft. welded steel plate girder bridge-Flathead River. One 128-ft. prestressed concrete beam overpass - NP RY. (Perma North).
203	S 236 (8)	8-30-64	1.2 miles grade, drain, surface. One 562-ft. riveted plate girder bridge. (N. of U. S. 10 & Montana 47).
204	S 316 (11)	9-30-64	7.6 miles grade, drain, aggregate & plant mix bituminous surfacing. (N. of Cut Bank).
205	S 318 (4) & S 347 (11)	8-31-65	8.2 miles grade, drain, aggregate & plant mix bituminous surfac. (Ekalaka S.).
	S 318 (3) & S 347 (10)	8-31-64	8.2 miles fencing. (Ekalaka S.).
206	S 192 (3)	5-15-64	Dual prestressed concrete beam bridges - I 90 Separation. (S. W. of Billings).
	S-SG 192 (4) U 1	9-1-64	1.0 miles grade, drain, aggregate & plant mix bituminous surface. Signing & delineation. (Connection to W. Billings Interchange).
	S-SG 192 (4) U 2	9-1-64	1.0 miles fencing. (Connection to W. Billings Interchange).
	S-SG 192 (5)	9-30-64	One 190-ft. prestressed concrete beam overpass - NP RY. (S. W. of Billings).
207	FHP 5-1 (1) 2 (2) *	1964	13.8 miles plant mix bituminous surfacing. (S. of Troy).
208	S 18 (6)	10-30-64	7.3 miles grade, drain, aggregate & plant mix bituminous surface. One 112-ft. prestressed concrete beam bridge-Musselshell River. (Twodot S.).
209	FHP 11-1 (1) & S 391 - FH*	1964	32.5 miles grading, drainage & base. Raising of three timber bridges-Lolo Creek. (U. S. 12 - Lolo to Idaho State Line).
	FHP 11-1 (2) *	1964	32.5 miles plant mix bituminous surfacing. (U. S. 12 - Lolo to Idaho State Line).
210	S 359 (7)	10-15-64	3.0 miles grade, drain, aggregate & plant mix bituminous surfacing. One 50-ft. treated timber bridge-Drainage. (Glendive S.).
211	ERFO 41 (1) **	1964	15.6 miles grade, drain, aggregate & plant mix bituminous surfacing. Two concrete slab bridges, 75-ft.-Grayling Creek & 124-ft.-Beaver Creek. Widen 83-ft. concrete girder bridges-Cabin Creek. (N. W. of W. Yellowstone).
212	S 218 (7)	6-15-64	1.0 mile grade, drain, aggregate & plant mix bituminous surface. (Russell St. - S. of Missoula).
213	S 301 (13)	9-1-64	5.0 miles grade, drain, aggregate & plant mix bituminous surface. (N. W. of Havre).
214	S 65 (6)	5-15-64	4.9 miles grade & drain. One 245-ft. prestressed concrete beam bridge - Swan River. (S. of Big Fork).
	S 65 (7)	9-15-64	4.9 miles aggregate & plant mix bituminous surface. (S. of Big Fork E.).
215	ROW S 370 (13)	5-15-64	Reset 239 rods of fencing. (W. of Wilsall).
	S 370 (15)	5-15-64	6.7 miles grade, cement stabilized base, drain, plant mix bituminous & seal coat oiling. (W. of Wilsall).
216	S 307 (14)	9-1-64	6.1 miles grade, drain, aggregate & plant mix bituminous surface. Widen three timber bridges to 28-ft.-Little Battle Creek, two 75-ft.-Butte and Cowboy Steel Creek. (S. E. of Geraldine).
217	S 389 (3)	5-15-64	2.7 miles, grade, drain, bituminous stabilized base, aggregate & plant mix bituminous. (Sidney Loop).
218	S 417 (3)	9-15-64	7.3 miles grade, drain, aggregate & plant mix bituminous surface. (S. E. of Plentywood).
219	S 85(00) U 2 & S 85 (3) U 2	5-15-64	Three prestressed concrete beam bridges. One 92-ft. & 71-ft.-Horse Prairie Cr. One 71-ft.-Medicine Lodge Cr. (Armstead W.).
220	S 192 (7)	9-30-64	3.2 miles grade, drain, aggregate & plant mix bituminous surface. (N. E. of Laurel).
221	S 129 (8)	5-15-64	7.0 miles grade, drain, surface, & plant mix bituminous surfacing. (Rapelje S.).
222	S 401 (3) U 1	5-15-64	8.2 miles grade, drain & aggregate surfacing. (Plevna S.).
	S 401 (3) U 2	6-30-64	Two 132-ft. prestressed concrete beam bridges - Sandstone & S. Fk. Sandstone Cr. (Plevna S.).
223	S 290 (16) & S 307 (12)	7-1-64	4.9 miles grade, drain, surface, & plant mix bituminous surfacing. Widen three timber bridges. (N. of Geraldine S.).
224	S 413 (3)	10-30-64	1.9 miles grade, drain, aggregate & plant mix bituminous surface. One 102-ft. prestressed concrete beam bridge - Flint Creek. (S. of Drummond E.).
	S 414 (3)	10-30-64	2.5 miles grade, drain, aggregate & plant mix bituminous surface. (S. of Drummond W.).
	S 413 (2)	8-1-64	1.9 miles fencing. (S. of Drummond E.).
	S 414 (2)	8-1-64	2.5 miles fencing. (S. of Drummond W.).
225	S 200 (5)	5-15-64	13.2 miles (part aggregate surface) plant mix bituminous surfacing. (Froid W.).
226	S 418 (3)	8-31-64	0.7 miles grade, drain & aggregate surface. One 245-ft. prestressed concrete beam bridge - Poplar River. (N. E. of Poplar).
227	S 407 (2)	10-31-64	0.3 miles grade, drain & aggregate surface. One 457-ft. welded steel plate girder bridge - Clark Fork. (S. E. of Alberton).
228	S 361 (12)	7-15-64	6.6 miles grade, drain, surface, & plant mix bituminous surfacing. (Girard W. to E.).
229	S 419 (3)	11-15-65	0.9 mile grade, drain, aggregate surface. 0.7 mile plant mix bituminous surface. (Approach I 90 Separation - W. of Alberton).
230	S 15 (10)	9-1-64	15.0 miles plant mix bituminous surface. (S. of Flaxville).
231	S 2 (15) U 2	9-15-64	1.8 miles seal coat oiling. (N. of Helena).
232	S 68 (5) U 2	9-15-64	13.0 miles seal coat oiling. (Winifred N.).
233	S 259 (2) U 2	9-15-64	9.0 miles seal coat oiling. (N. E. of Forsyth).
234	S 131 (3) U 2	9-15-64	6.5 miles seal coat oiling. (Brady E.).
235	S 339 (9) U 2	9-15-64	6.6 miles seal coat oiling. (S. of Chester).
2[illegible]	S 368 (17)	7-16-64	8.7 miles aggregate, plant mix bituminous surfacing & seal coating. (N. of Glasgow).
2[illegible]	S 402 (3)	5-15-64	7.8 miles, grade, drain, surface, plant mix bituminous & seal coat oiling. (N. E. of Culbertson).
250	S 121 (4)	5-15-64	11.6 miles (1.0 mile grade & drain) aggregate & plant mix bituminous surfacing. (Utica to Hobson).
251	S 322 (7)	5-15-64	6.3 miles grade, drain, surface & plant mix bituminous surfacing. (E. of Hardin).
	OFF SYSTEM PROJECTS		
303	R AD 7 (1) *	1964	8.7 miles grading, drainage & aggregate surfacing. (Brooks E.).
304	FHP 59-2 (1) & FL 59 (1),(2)*	1964	8.7 miles grading, drainage, aggregate & plant mix bituminous surfacing. (S. of Red Lodge).

* - Bureau of Public Roads Projects.
** - Bureau of Public Roads Projects. - Map Index Numbers 128 & 211 one contract.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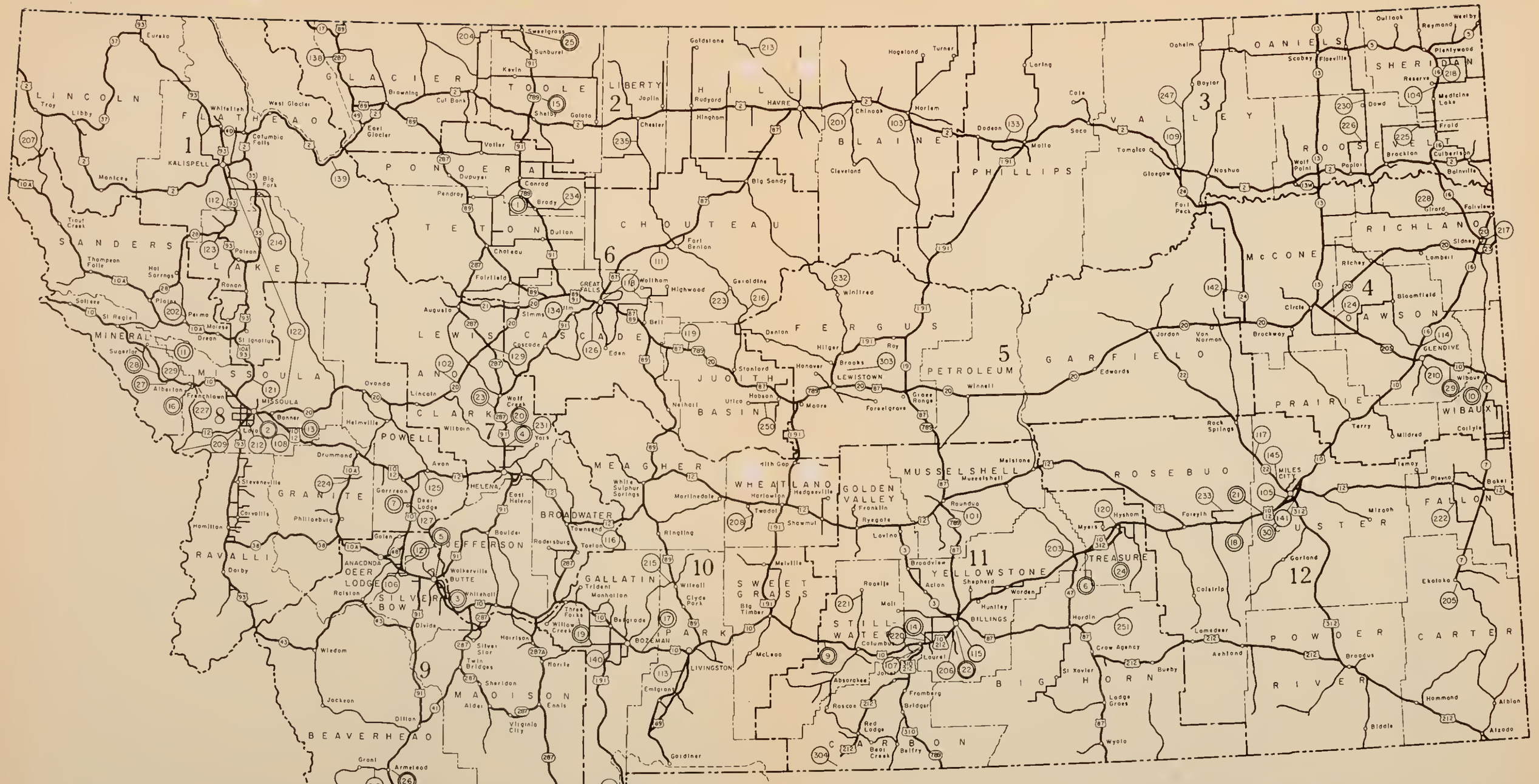
LINCOLN
FLATHEAD
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HILL
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PHILLIPS
VALLEY
DANIELS
SHERIDAN
ROOSEVELT
RICHLAND
MCCONE
DAWSON
GARFIELD
PRAIRIE
WIBAUX
SANDERS
LAKE
MINERAL
MISSOULA
PONDERA
TETON
CHOUTEAU
FERGUS
PETROLEUM
LEWIS AND CLARK
JUDITH BASIN
POWELL
CLARK
MEAGHER
WHEATLAND
GOLDEN VALLEY
MUSSELSHELL
ROSEBUD
GRANITE
JEFFERSON
BROADWATER
SWEET GRASS
STILLWATER
YELLOWSTONE
TREASURE
CARTER
FALLON
POWDER RIVER
RAVALLI
SILVER BOW
GALLATIN
PARK
MADISON
BEAVERHEAD
BIG HORN
CARBON
Kalispell
Missoula
Helena
Butte
Bozeman
Billings
Great Falls
Havre
Miles City
Glasgow
Lewistown
Livingston
Dillon
Hamilton
Anaconda
Deer Lodge
Whitefish
Columbia Falls
West Glacier
Eureka
Libby
Troy
Browning
Cut Bank
Shelby
Sunburst
Sweetgrass
Kevin
Galata
Joplin
Chester
Rudyard
Hingham
Chinook
Harlem
Hogeland
Turner
Dodson
Malta
Saco
Zortman
Landusky
Fort Peck
Glasgow
Tomalco
Nashua
Wolf Point
Poplar
Froid
Brockton
Culbertson
Bainville
Scobey
Flaxville
Outlook
Reymond
Westby
Plentywood
Reserve
Medicine Lake
Dowd
Baylor
Ophelm
Loring
Cole
Cleveland
Big Sandy
Geraldine
Highwood
Fort Benton
Winifred
Denton
Hilger
Roy
Brooks
Hanover
Stanford
Hobson
Utica
Moore
Grass Range
Forest Grove
Winnett
Edwards
Jordan
Van Norman
Brockway
Circle
Richey
Lambert
Sidney
Bloomfield
Glendive
Wibaux
Terry
Mildred
Rock Springs
Melstone
Musselshell
Roundup
Ryegate
Lavina
Broadview
Shepherd
Worden
Huntley
Acton
Molt
Roscoe
Absarokee
Fromberg
Bridger
Red Lodge
Belfry
Bear Creek
Hysham
Myers
Forsyth
Miles City
Colstrip
Hardin
Crow Agency
St Xavier
Lodge Grass
Wyola
Lame Deer
Ashland
Broadus
Biddle
Hammond
Albion
Alzada
Ekalaka
Baker
Plevna
Mizpah
Custer
Gartland
Shawmut
Twodot
Harlowton
Hedgesville
Martinsdale
White Sulphur Springs
Ringling
Melville
Rosalia
Willeoll
Clyde Park
Three Forks
Manhattan
Trident
Belgrade
Willow Creek
Norris
Sheridan
Twin Bridges
Silver Star
Virginia City
Ennis
Alder
Harrison
Divide
Wisdom
Jackson
Grant
Armstead
Lima
Monida
West Yellowstone
Gardiner
Emigrant
Big Timber
McLeod
Columbus
Laurel
Joliet
Absarokee
Roscoe
Red Lodge
Bear Creek
Belfry
Bridger
Fromberg
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Hysham
Myers
Roundup
Melstone
Musselshell
Ryegate
Lavina
Broadview
Shepherd
Worden
Huntley
Acton
Molt

MAP INDEX NUMBER	PROJECT NUMBER	PROBABLE COMPLETION DATE	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
	FEDERAL AID INTERSTATE PROJECTS		
1	I 15-6 (5) 311 U 1 &	7-1-64	11.6 miles grade, drain, surface & plant mix bituminous surfacing. (U. S. 91 - Brady S. to N.).
	I 15-7 (3) 312 U 1		
	I 15-6 (5) 312 U 2	7-1-64	1.0 mile fencing. (U. S. 91 - Brady S. to N.).
	I 15-7 (3) 312 U 3	7-1-64	10.6 miles fencing. (U. S. 91 - Brady S. to N.).
	I 15-7 (3) 312 U 2	4-15-64	Two prestressed concrete bridges. One 241 ft. grad, inter change & one 21 ft. county, road separation. (U.S. 91 - Brady S. to N.).
	I 15-6 (6) 311 &	7-1-64	11.6 miles signing & delineation. (U. S. 91 - Brady S. to N.).
	I 15-7 (4) 312		
	I 15-6 (7) 311	5-15-64	1.0 mile seeding & mulching. (U. S. 91 - Brady S. to N.).
	I 15-7 (5) 312	5-15-64	10.6 miles seeding & mulching. (U. S. 91 - Brady S. to N.).
2	I 90-2 (14) 105	7-31-64	4.7± ft. of 84 inch R.C.P. Storm Sewer. (Van Buren St. - Interchange).
3	I 90-4 (8) 240 U 1	7-30-65	2.8 miles four lane divided, grade, drain, cement stabilized base, aggregate surface, plant mix bituminous surface & concrete pavement. (New alignment I 90 - Butte S. E.).
	I 90-4 (8) 226 U 2	5-15-64	2.8 miles fencing. (New alignment - Butte S. E.).
	I 90-4 (8) 226 U 3	7-31-64	One 240 ft. prestressed concrete beam underpass - County road separation. (New alignment I 90 - Butte S. E.).
4	I 15-4 (6) 186 U 4	5-15-64	8.2 miles fencing & cattle guards. (U. S. 91 - Helena N.).
	I 15-4 (6) 186 U 5	7-15-64	8.2 miles seal coat oiling. (U. S. 91 - Helena N.).
	I 15-4 (11) 182	5-15-64	28.2 miles seeding & mulching. (U. S. 91 - U. of Helena N.).
	I 15-4 (15) 186	5-15-64	8.2 miles signing. (U. S. 91 - Helena N.).
5	I-IG 15-2 (16) 126 U 1 & I 115-2 (2) 126 U 1	9-30-64	2.6 miles grading, drain, surface, concrete paving, plant mix bituminous & seal coat oiling. (U. S. 91 - Butte N. ..
	I-IG 15-2 (16) 126 U 2 & I 115-2 (2) 126 U 2	9-30-64	Five structures. Two prestressed concrete beam overpasses. One 301 & 341 ft. RR# - N. & S.P&S# RR. Three steel & concrete overpasses. One 442 & 645 ft. NP RY & Clark Fork. One 244 ft. N. Butte interchange. (U. S. 91 - Butte N.).
	I 115-2 (2) 126 U 3	4-30-64	2.2 miles fencing. (U. S. 91 - Butte N.).
	I 115-2 (2) 126 U 3	4-30-64	0.4 mile fencing. (U. S. 91 - Butte N.).
	I-IG 15-2 (16) 126 U 4	5-15-64	Dual 463 ft. steel & concrete overpasses - NP RY & CM&STP&P RR. (U. S. 91 - Butte N.).
	I-IG 15-2 (18) 131 U 1	7-31-65	3.6 miles grade, drain, cement stabilized base, aggregate & plant mix bituminous surfacing. One 230 ft. Steel & Concrete overpass - NP RY. Signing. (New alignment I 15 - Butte Northeast).
	I-IG 15-2 (18) 131 U 2	4-30-65	3.6 miles fencing. (New alignment I 15 - Butte Northeast).
	I 15-2 (19) 126	10-15-64	5.5 miles signing, delineation & lighting. (U. S. 91 - N. of Butte E.).
6	I 94-2 (5) 55 U 1	5-15-64	7.4 miles (4.0 miles four-lane divided) grade, drain, surface, plant mix bituminous surfacing. (U. S. 10 - S... of Hysham).
	I 94-2 (5) 55 U 2	5-15-64	6.4 miles fencing. (U. S. 10 - S... of Hysham).
7	I 90-3 (11) 180	5-15-64	8.6 miles seeding & mulching. (U. S. 10 - N. & S. of Deer Lodge).
9	I 90-7 (8) 387 U 1 & I-IG 90-8 (12) 388 U 1	5-15-64	5.9 miles grade, drain, surface, plant mix bituminous & seal coat oiling. (U. S. 10 - W. of Columbus).
	I-IG 90-8 (12) 388 U 2	5-15-64	4.6 miles grade, drain, surface, plant mix bituminous, seal coat oil. Frontage roads. (U. S. 10 - W. of Columbus).
	I 90-7 (8) 387 U 3	5-15-64	5.4 miles fencing. (U. S. 10 - W. of Columbus).
	I-IG 90-8 (12) 388 U 4	5-15-64	4.6 miles fencing. (U. S. 10 - W. of Columbus).
	I 90-7 (11) 387 & I 90-8 (18) 388	5-15-64	10.5 miles signing & delineation. (U. S. 10 - W. of Columbus).
10	I 94-7 (6) 233	5-15-64	15.. miles seeding & mulching. (U. S. 10 - W. of Hysham E.).
11	I 90-1 (16) 43	8-31-64	6.7 miles seeding & mulching. (U. S. 10 - E. & S. of Superior).
12	I-IG 90-4 (7) 205 U 1	4-1-64	4.5 miles four-lane divided, grade, drain, cement stabilized base, surfacing & plant mix bituminous surfacing. Frontage roads, rest areas, signing & delineation. (U. S. 10 - S. of Deer Lodge).
	I-IG 90-4 (7) 205 U 2	8-31-64	Three prestressed concrete beam structures. One 208-ft. Anaconda Interchange. Dual 211-ft. overpasses - CM&STP&P RR. (U. S. 10 - S. of Deer Lodge).
	I-IG 90-4 (7) 205 U 3	5-15-64	4.5 miles fencing. (U. S. 10 - S. of Deer Lodge).
13	I-IG 90-2 (10) 110 U 1	7-1-64	4.3 miles four-lane divided, grade, drain, surface & plant mix bituminous surfacing. (U. S. 10 - W. of Bonner E.).
	I 90-2 (11) 114 U 1	9-1-64	4.9 miles four-lane divided, grade, drain, surface, plant mix bituminous surface. Frontage roads. (U. S. 10 - W. & E. of Bonner).
	I 90-2 (11) 114 U 2	7-1-64	4.9 miles fencing. (U. S. 10 - S. E. of Bonner).
	I-IG 90-2 (10) 110 U 2	5-15-64	4.3 miles fencing. (U. S. 10 - W. of Bonner E.).
	I-IG 90-2 (10) 110 U 3	7-31-64	Eight structures. Dual 343-ft. Steel plate Girder-Flat Foot River. Six prestressed concrete beams, dual 153-ft. - CM&STP&P RR. Dual 118-ft. frontage road separation. Dual 118-ft.-Turah Interchange. (U. S. 10 - W. of Bonner E.).
27	I 90-2 (22) 108	5-31-65	Four continuous welded steel plate girder bridges - Dual 455-ft. & dual 604-ft. - Clark Fork. (U. S. 10 - W. of Bonner E.).
	I 90-2 (23) 110	5-31-64	One 215-ft. prestressed concrete beam underpass-U.S. 10. (U. S. 10 - W. of Bonner E.).
14	I-IG 90-8 (17) 433 U 1	7-30-64	5.3 miles four-lane divided, grade, drain, surface, plant mix bituminous surface. Weigh station. (U. S. 10 - Laurel E.).
	I-IG 90-8 (17) 433 U 2	6-30-64	Eight structures, two 364-ft. steel overpasses (U. S. 212 - Laurel Interchange) six prestressed concrete beam structures, one 24.5-ft. county road separation, two 124-ft. Yellowtail Interchange & three 64-ft.-U.P.R.R. canal. (U. S. 10 - Laurel E.).
	I-IG 90-8 (17) 433 U 3	7-30-64	5.3 miles fencing. (U. S. 10 - Laurel E.).
15	I 15-8 (14) 357 U 1	11-1-64	12.0 miles, grade, drain, surface, plant mix bituminous surface, rest area & ...ighting. (U. S. 91 - N. of Shelby).
	I 15-8 (14) 357 U 2	12-31-64	Two prestressed concrete beam structures, one 168-ft. Co. Rd. Interchange, one 114-ft.-Ultimate interchan e. (U. S. 91 - N. of Shelby).
	I 15-8 (14) 357 U 3	5-15-64	12.0 miles fencing. (U. S. 91 - N. of Shelby).
	I 15-8 (15) 357	5-15-64	12.0 miles seeding & mulching. (U. S. 91 - N. of Shelby).
16	I 90-2 (15) 81	9-30-64	One 674-ft. welded steel plate girder bridge - Clark Fork. Dual 143-ft. prestressed concrete beam bridges - Nine Mile Interchange. (U. S. 10 - E. of Alberton).
	I-IG 90-2 (18) 82	11-30-64	One 981-ft. welded steel plate girder bridge - Clark Fork & CM&STP&P RR. (U. S. 10 - W. of Alberton).
	I-IG 90-2 (21) 80 U 1	11-15-64	4.3 miles (2.6 miles four-lane divided) grade, drain, surface, plant mix bituminous surface. Signing. (U. S. 10 - W. of Alberton).
	I-IG 90-2 (21) 80 U 2	11-15-64	4.3 miles fencing. (U. S. 10 - E. of Alberton).
	I 90-1 (23) 75	5-15-64	2.8 miles seeding & mulching. (U. S. 10 - Alberton W.).
	I 90-2 (26) 78	5-15-64	2.2 miles seeding & mulching. (U. S. 10 - Alberton E.).
17	I 90-6 (12) 309	5-15-64	5.3 miles seeding & mulching. (U. S. 10 - E. of Bozeman).
	I-IG 90-6 (2) 309 U 3	4-15-64	5.3 miles seal coat oiling. (U. S. 10 E. of Bozeman).
18	I 90-3 (8) 114	5-15-64	4.9 miles seeding & mulching. (U. S. 10 - E. of Forsyth).
19	I-IG 90-6 (9) 276	6-30-64	Dual 755 & 684-ft. prestressed concrete beam structures-Gallatin Rd., Gallatin River, & Walls Interchange. (U. S. 10 - E. of Three Forks).
	I-IG 90-6 (10) 282 U 1	7-31-64	5.0 miles four-lane divided, grade & drain. Three prestressed concrete beam structures. Dual 158-ft. Gallatin Rd. One 235-ft. Manhattan Interchange. (U. S. 10 - E. of Three Forks).
	I-IG 90-6 (10) 282 U 2	7-31-64	5.0 miles fencing. (U. S. 10 - E. of Three Forks).
	I-IG 90-6 (15) 276	7-28-64	10.5 miles cement stabilized base, aggregate surfacing, concrete pavement & signing. (U. S. 10 - E. of Three Forks).
	IG 90-6 (11) 287	7-31-64	Dual 163-ft. prestressed concrete beam overpasses-RR. RY. (U. S. 10 - E. of Three Forks).
20	I 15-4 (16) 194	5-15-64	12.7 miles signing. (U. S. 91 - Helena N.).
	I 15-4 (17) 204	5-15-64	3.. miles signing. (U. S. 91 - Helena N.).
	I 15-4 (9) 194 & I 15-4 (12) 207 U 3	5-15-64	12.7 miles seal coat oiling. (U. S. 91 - N. of Helena).
	I 15-4 (12) 207 U 3	5-15-64	3.4 miles seal coat oiling. (U. S. 91 - N. of Helena).
21	I 94-4 (11) 119	5-15-64	28.7 miles seeding & mulching. (U. S. 10 - W. of Miles City E.).
22	I 90-8 (11) 344	5-15-64	Dual prestressed concrete beam bridges, 192 & 190-ft.- West Billings Interchange. (U. S. 10 - S. W. of Billings).
	I 90-8 (25) 438	4-1-64	6.1 miles signing & delineation. (U. S. 10 - S. W. of Billings).
	I 90-8 (19) 443 U 1	4-1-64	1.2 miles grade, drain, aggregate & plant mix bituminous surfacing. Signing & delineation. (U. S. 10 - west Billings Interchange).
	I 90-8 (15) 443 U 2	4-1-64	1.2 miles fencing. (U. S. 10 - west Billings Interchange).
23	I 15-4 (18) 210 U 1 & I-IG 15-4 (19) 211	11-30-64	2.1 miles four-lane divided, grade, drain, surface, plant mix bituminous surfacing & signing. (U. S. 91 - S. of Great Falls).
	I 15-4 (20) 210		
	I 15-4 (18) 210 U 2	11-30-64	2.1 miles fencing. (U. S. 91 - S. of Great Falls).
	I-IG 15-4 (19) 211	7-31-64	Four prestressed concrete beam structures, dual 196-ft.-Spring Creek Interchange, NP RY & Prickly Pear Creek, dual 235-ft.-Lyons Creek Separation. (U. S. 91 - S. of Wolf Creek).
	I 15-4 (20) 212 U 1	5-30-64	5.8 miles grade, aggregate surface, plant mix bituminous surface - signing. Rest Area. (U. S. 91 - Wolf Creek S.).
	I 15-4 (20) 212 U 2	4-30-64	5.8 miles fencing. (U. S. 91 - Wolf Creek S.).
	I 15-4 (20) 210	11-30-64	Dual 319-ft.-Steel Bridge-Little Prickly Pear Creek. (U. S. 91 - Wolf Creek S.).
24	I 94-2 (6) 61 U 1	5-1-64	5.6 miles grade, drain, surface & plant mix bituminous surfacing. One 143-ft. prestressed concrete beam overpass-Hysham Interchange. (U. S. 10 - S. W. of Hysham).
	I 94-2 (6) 61 U 2	9-1-64	5.6 miles fencing. (U. S. 10 - S. W. of Hysham).
25	I 15-8 (11) 383 U 2	5-15-64	4.5 miles fencing. (U. S. 91 - Sweetgrass S.).
	I 15-8 (11) 383 U 1	11-15-64	4.5 miles (1.2 miles four-lane divided) grade, drain, plant mix bituminous surfacing & signing. One 236-ft. prestressed concrete beam bridge-Sweetgrass Interchange. (U. S. 91 - Sweetgrass S.).
	I 15-8 (16) 383	5-15-64	4.5 miles seeding & mulching. (U. S. 10 - Sweetgrass S.).
26	I 15-1 (17) 46 U 1	9-30-64	5.3 miles grade, drain, surface, plant mix bituminous surfacing. One 47-ft. concrete slab junior grade separation & signing. (U. S. 91 - Armstead N.).
	I 15-1 (17) 46 U 2	7-31-64	One 401-ft.-welded plate girder & one 453-ft.-prestressed concrete beam bridge-Beaverhead River. (U. S. 91 - Armstead N.).
	I 15-1 (17) 46 U 3	9-30-64	5.3 miles fencing. (U. S. 91 - Armstead N.).
27	I 90-1 (21) 67	5-30-65	One 807-ft. continuous welded plate girder bridge-Clark Fork. (U. S. 10 - W. of Alberton).
	I 90-1 (22) 71	7-31-65	One 762-ft. continuous welded plate girder bridge-Clark Fork. (U. S. 10 - W. of Alberton).
	I-IG 90-1 (27) 65 U 1	11-31-65	6.6 miles grade, drain, aggregate & plant mix bituminous surfacing. Signing. (U. S. 10 - W. of Alberton).
	I-IG 90-1 (28) 72 U 1	11-15-65	3.7 miles grade, drain, aggregate & plant mix bituminous surface. Frontage Road. Rest Areas. Lighting. (U. S. 10 - W. of Alberton).
	I-IG 90-1 (27) 65 U 2	5-30-65	6.6 miles fencing. (U. S. 10 - W. of Alberton).
	I-IG 90-1 (28) 65 U 2	5-30-65	3.7 miles fencing. (U. S. 10 - W. of Alberton).
	I-IG 90-1 (26) 66	6-30-65	Three structures. One 445-ft. steel & concrete overpass-NP RY & the one frontage road. One ...-ft. steel & concrete overpass - I. One 198-ft. prestressed concrete underpass-Flash Creek Interchange. (U. S. 10 - W. of Alberton).
28	I 90-1 (25) 59	10-31-65	One 826-ft. welded plate girder bridge - Clark Fork. (U. S. 10 - W. of Superior).
	I 90-1 (24) 54	8-31-65	One 757-ft.-welded plate girder bridge - Clark Fork. (U. S. 10 - W. of Superior).
29	I 94-6 (7) 216	7-15-65	4.2 miles signing. (U. S. 10 - E. of Iversite).
	I 94-6 (8) 221 U 1	7-15-65	12.8 miles grade, drain, aggregate & plant mix bituminous surface. Eight one 36-ft.-x-1 24th Ires... One 24-ft. prestressed concrete beam bridge-Hedges Road Separation. (U. S. 10 - E. of Iversite). Signing & delineation.
	I 94-6 (8) 221 U 2	7-15-65	12.8 miles fencing. (U. S. 10 - E. of Iversite).
30	I 94-4 (13) 136	5-15-64	0.5 miles reshaping & placement of bank protection on Tongue River Channel. (I 94 - W. of Miles City).

MAP INDEX NUMBER	PROJECT NUMBER	PROBABLE COMPLETION DATE	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
	FEDERAL AID PRIMARY PROJECTS		
101	P 33 (6) & P 108 (7)	7-30-64	8.0 miles grade, drain, aggregate & plant mix bituminous surface. (U. S. 93 - N. of Noxon).
102	P 50 (10) & F 267 (8)	10-15-64	7.. miles aggregate, plant & bituminous surfacing. (Montana 20 - E. of Lincoln).
103	P 152 (7) U 2	8-31-64	One 343-ft. prestressed concrete beam bridge-Hill River. One large structures plate pipe - Indian Service Irrigation Canal. (U. S. 2 - S. of Havre).
	P 243 (13)	5-15-64	11.6 miles grass seeding. (Montana 1? - Medicine Lake N.).
	F 135 (18)	5-15-64	8.4 miles seeding & mulching. (U. S. 10 - W. of Miles City).
104	F-15 8 (12), 1	4-1-64	4.7 miles (four-lane divided) grade, drain, surface, plant mix bituminous surface. Signing & delineation. (U. S. 10 A - East of Anaconda).
	F-15 8 (12) U 2	5-15-64	Four prestressed concrete beam bridges, dual 70-ft.-Clark Fork & dual-148-ft.-NP RY. (U. S. 10 A - East of Anaconda).
	40mF-10 68 (8)	5-15-64	2.7 miles fencing. (U. S. 10 A - E. of Anaconda).
107	P 134 (6)	7-30-64	0.7 miles grade, drain, surface & plant mix bituminous surface. (U. S. 212 - Laurel S.).
108	P 91 (18)	4-15-64	0.2 miles grade, drain, aggregate & plant mix bituminous surface. One 65-ft. prestressed concrete beam bridge-Rattlesnake Creek. (U. S. 10 - in Missoula).
109	F 114 (8)	5-15-64	4.7 miles grass seeding. (U. S. 2 - Glasgow E.).
111	F 14? (14) & F 25? (15)	4-15-64	4.8 miles grade, drain, surface & plant mix bituminous surface. (U. S. 87 - S. W. of Fort Benton).
112	P 191 (24)	8-31-65	5.7 miles grade, drain, aggregate & plant mix bituminous surfacing. (U. S. 93 - S. of Kalispell).
113	F 291 (19) N 2	9-15-64	5.5 miles seal coat oiling. (U. S. 93 - S. of Kalispell).
114	F 217 (11)	10-15-65	9.2 miles grade, drain, aggregate & plant mix bituminous surface. Relocate portion of NP RY tracks. (U. S. 89 - S. of Livingston).
114	F 245 (16)	10-30-64	5.3 miles grade, drain, aggregate & plant mix bituminous surface. One 114-ft. prestressed concrete beam bridge - Deer Creek. (Montana 16 - N.E. of Grenville).
115	U 89 228 (16)	5-15-64	1.5 miles grade, drain, cement stabilized base, surface, concrete pavement, plant mix bituminous, seal coat oil. One concrete underpass - NP RR. (U. S. 10 - In Billings).
	F 228 (19) U 1	9-1-64	0.6 miles grade, drain, aggregate & plant mix bituminous surface. Signing & delineation. (U. S. 10 - West Billings Interchange).
	F 228 (19) U 2	7-1-64	0.6 miles fencing. (U. S. 10 - West Billings Interchange).
	F 228 (21)	5-31-64	1.5 miles signing, signals & lighting. (U. S. 10 - In Billings).
116	F 264 (8)	10-31-64	7.2 miles grade, drain, aggregate & plant mix bituminous surfacing. (U. S. 12 - Townsend E.).
117	F 157 (16) U 3	7-15-64	5.0 miles seal coat oiling. (Montana 22 - N.W. of Miles City).
118	F 149 (20)	6-30-64	0.4 miles signing & delineation. (U. S. 87 - N. of Great Falls).
	F 395 (3) & F 395 (5)	6-30-64	1.5 miles signing & delineation. (14th & 15th St. - In Great Falls).
119	F 235 (25)	5-15-64	7.6 miles grade, drain, surface, plant mix bituminous surface. One-81-ft. prestressed concrete beam bridge-Otter Creek. (U. S. 87 - N. of Stanford).
	F 235 (31)	5-15-64	4.0 miles plant mix bituminous surface. (U. S. 87 - N. of Stanford).
120	F 112 (5)	9-1-64	7.4 miles grade, drain, surface & plant mix bituminous surfacing. (Hysham Connection to Interstate).
121	F FG 219 (16) U 1	5-15-64	7.8 miles grade, drain, surface & plant mix bituminous surfacing. (U. S. 10 A - N. W. of Missoula).
122	F 219 (17)	5-15-64	9.8 miles seeding & mulching. (U. S. 10 A & 93 - Missoula to Kalispell).
	F 9?? (1)	5-15-64	11? miles signing. (U. S. 10 A, & 93 - Missoula to Kalispell).
123	F 191 (20) U 1	5-15-64	7.3 miles (4.5 miles grade & drain) surface, plant mix bituminous & seal coat oiling. (U. S. 93 - N. of Polson).
124	F 245 (13)	11-15-64	7.2 miles grade, drain, aggregate & plant mix bituminous surfacing. (Montana 20 S - S. E. of Circle).
125	F 249 (15)	5-15-64	0.6 miles grade, drain & bride area stabilization. (U. S. 12 - E. of Garrison).
126	U 427 (6) & F 388 (6	5-15-64	2.7 miles street widening, curbs, plant mix bituminous surfacing, traffic signals & signing. (10th Avenue & Bypass-in Great Falls).
	F 388 (7)	6-30-64	0.6 miles highway lighting. (10th Avenue S. - in Great Falls).
127	F 184 (15)	5-15-64	1.1 miles seeding & mulching. (U. S. 10 N. of Deer Lodge).
128	BRFO 41 (1)* *	1964	1.0 miles grade, drain, aggregate & plant mix bituminous surface. One 36-ft. concrete slab bridge - Cougar Creek. (U. S. 191 - N. of W. Yellowstone).
129	F 239 (8) 3	6-15-64	9.5 miles seal coat oiling. (Montana 287 - N. of Wolf Creek).
130	F 253 (3)	5-15-64	4.0 miles grass seeding. (U. S. 2 - E. of Polson).
134	F 17? (7)	7-30-64	5.3 miles grade, drain, surface & plant mix bituminous surfacing. (Montana 20 - E. of Sirrs).
138	P 210 (4)	5-15-64	5.0 miles plant mix bituminous surfacing. (U. S. 89 - N. W. of Browning).
	P 227 (5)	5-15-64	4.0 miles plant mix bituminous surfacing. (U. S. 89 - N. E. of Browning).
	F 227 (6)	5-15-64	4.3 miles grade, drain, surface & plant mix surfacing. (U. S. 89 - N. W. of Browning).
139	F? 1?-3 (1)*	1964	4.1 miles grade, drain & base. One 60-ft. reinforced concrete bridge-Bear Creek. One 70-ft. concrete tie bridge-Devil Creek. (U. S. 2 - E. - Shelby).
140	F 209 (6)	7-15-64	3.5 miles grade, drain, aggregate & plant mix bituminous surface. Four 45-ft. concrete bridges. (U. S. 2 - W. of Hingham).
141	F 86 (22)	5-15-64	0.8 miles seeding & mulching. (U. S. 10 - S. W. of Miles City).
142	F 315 (17)	5-15-64	14.0 miles grass seeding. (Montana 24 - ... of Fort Peck).
	F 315 (18)	5-15-64	11.4 miles grass seeding. (Montana 24 - ... of Fort Peck).
145	F 157 (17)	7-15-64	10.? miles, grade, drain, surface, plant mix bituminous surface. Widen one 36-ft.-x-1 24th Ires... One 24-ft. prestressed concrete beam bridge to 44-ft. roadway S. Fork Sunday Creek. One 144-ft.-prestressed concrete beam bridge-N. Fork Sunday Creek. (Montana 24 - ... of Miles City).

MAP INDEX NUMBER	PROJECT NUMBER	PROBABLE COMPLETION DATE	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
	FEDERAL AID SECONDARY PROJECTS		
201	S 311 (5)	8-31-64	0.? miles grade, drain, aggregate & plant mix bituminous surface. One 45-ft. prestressed concrete beam bridge-Milk River (U. S. of Chinook).
202	S 98 (4)	8-31-65	1.1 mile grade, drain, aggregate & plant mix bituminous surface. One 534-ft. welded steel plate girder bridge-Flathead River. One 124-ft. prestressed concrete beam overpass - NP RR. (Montana 35 - E. of Kalispell).
203	S 236 (8)	8-30-64	1.. miles grade, drain, surface. One 364-ft. riveted plate girder bridge. (U. S. of ... 10 & Montana 47).
204	S 316 (11)	8-30-64	7.6 miles grade, drain, aggregate & plant mix bituminous surfacing. (U. S. of Sun Banks).
205	S 318 (4) & S 347 (11)	8-31-65	8.. miles grade, drain, aggregate & plant mix bituminous surface. (Kalaska S.).
	S 318 (3) & S 347 (10)	8-31-64	8.. miles fencing. (Kalaska S.).
206	S 192 (3)	5-15-64	Dual prestressed concrete beam bridges - I 90 Separation. (U. S. of Billings).
	S-S? 192 (4) U 1	7-1-64	1.0 miles grade, drain, aggregate & plant mix bituminous surface. Signing & delineation. (Connection to W. Billings Interchange).
	S-S? 192 (4) U 2	7-1-64	1.0 miles fencing. (Connection to W. Billings Interchange).
	S-S? 192 (5)	7-30-64	One 140-ft. prestressed concrete beam overpass - NP RY. (U. S. of Billings).
207	NHP 5-1 (1) & (2) *	1964	11.4 miles plant mix bituminous surfacing. (U. S. of Ty).
208	S 18 (6)	10-30-64	7.3 miles grade, drain, aggregate & plant mix bituminous surface. One 114-ft. prestressed concrete beam bridge-Musselshell River. (Twodot S.).
209	NHP 11-1 (1) & S 371 - 1?*	1964	32.5 miles grading, drainage & base. Widening of three timber bridges-Musselshell River, Box Elder Creek & Lolo Trail State Line).
	NHP 11-1 (2) *	1964	3.5 miles plant mix bituminous surfacing. (U. S. - Lolo to State Line).
10	S 359 (7)	10-15-64	3.0 miles grade, drain, aggregate & plant mix bituminous surfacing. One 3-lt. treated timber bridge-Drainage. (Glendive ...).
211	BRFO 41 (1) **	1964	15.6 miles grade, drain, aggregate & plant mix bituminous surfacing. Two prestressed concrete bridges, 75-ft.-Grayling Creek & 124-ft.-Beaver Creek. Widen 43-ft. concrete girder bridges-Shoofly Creek. (U. S. 2 - Wolf Creek).
212	S 368 (7)	8-31-64	1.0 mile grade, drain, aggregate & plant mix bituminous surface. Replace 36-ft. x 84-ft. timber bridge. (U. S. of Missoula).
213	S 38 (13)	8-1-64	5.0 miles grade, drain, aggregate & plant mix bituminous surface. (U. S. of Havre).
214	S 65 (6)	8-31-64	4.? miles grade & drain. One 145-ft. prestressed concrete beam - Beaver River. (U. S. Big Fork).
215	S ? ?	4-15-64	4.? miles aggregate & plant mix bituminous surface. (U. S. of Fork ...).
	NHS S 330 (14)	5-15-64	Repair 239 rods of fencing. (U. S. of Wilsall).
216	S 70 (15)	5-15-64	.7 miles grade, cement stabilized base, drain, plant mix bituminous & seal coat oiling. (U. S. of Wilsall).
216	S ? ?	4-1-64	7.1 miles grade, drain, aggregate & plant mix bituminous surfaces. Widen three timber bridges, one 16-ft.-Little Cattle Creek, two 24-ft.-Rite and Muddy Creek. (U. S. 10 - Terminus).
217	S 38? (3)	5-15-64	4.? miles, grade, drain, bituminous stabilized base, aggregate & plant mix bituminous. (Bridger Loop).
218	S ?? (3)	7-15-64	7.3 miles grade, drain, aggregate & plant mix bituminous surfaces. (U. S. of Fromberg).
219	S 85(??) U 2 & S 85 (3) U 2	5-15-64	Three prestressed concrete beam bridges. One 44-ft. & 74-ft.-Horse Prairie Cr. One 74-ft.-Medicine Lodge Cr. (Armstead N.).
220	S 152 (7)	7-30-64	3.. miles grade, drain, aggregate & plant mix bituminous surfaces. (U. S. of Laurel).
221	S L ? ?	5-15-64	7.0 miles grade, drain, surface, & plant mix bituminous surfacing. (Cooperville).
222	S ? 1 (?) U 1	5-15-64	8.2 miles grade, drain & aggregate surfacing. (Plevna).
	S 201 (3) U 2	6-30-64	Two 137-ft. prestressed concrete beam bridges - Sandstone & S. Fk. Sandstone Cr. (Plevna).
223	S 290 (16) & S 367 (12)	7-1-64	4.7 miles grade, drain, surface, & plant mix bituminous surfacing. Widen three timber bridges. (N. of Geraldine S.).
224	S 413 (3)	10-30-64	1.4 miles grade, drain, aggregate & plant mix bituminous surface. One 102-ft. prestressed concrete beam bridge - Flint Creek. (S. of Drummond E.).
	S 414 (3)	10-30-64	2.5 miles grade, drain, aggregate & plant mix bituminous surface. (S. of Drummond W.).
	S 412 (?)	8-1-64	1.9 miles fencing. (S. of Drummond E.).
	S 412 (?)	8-1-64	2.5 miles fencing. (S. of Drummond W.).
225	S 240 (5)	5-15-64	13.2 miles (part aggregate surface) plant mix bituminous surfacing. (Froid W.).
226	S 418 (3)	8-31-64	0.7 miles grade, drain & aggregate surface. One 245-ft. prestressed concrete beam bridge - Poplar River. (N. E. of Poplar).
227	S 407 (2)	10-31-64	0.5 miles grade, drain & aggregate surface. One 457-ft. welded steel plate girder bridge - Clark Fork. (U. S. of Alberton).
228	S 361 (12)	7-15-64	4.6 miles grade, drain, surface, & plant mix bituminous surfacing. (Circle N. to E.).
229	S 214 (4)	11-1-64	.? miles grade, drain, aggregate & plant mix bituminous surface. (Approach I 90 separation - W. of Alberton).
230	S 15 (10)	4-1-64	15.0 miles plant mix bituminous surface. (S. of Plaxville).
231	S ? (15) U 1	7-15-64	1.8 miles seal coat oiling. (W. of Helena).
232	S 68 (5) U 2	7-1-64	11.0 miles seal coat oiling. (Winifred N.).
233	S 54 (2) U 2	7-1-64	9.0 miles seal coat oiling. (N. E. of Forsyth).
234	S 131 (5) U 2	7-1-64	4.5 miles seal coat oiling. (Brady F.).
235	S 339 ( ) U.	7-15-64	7.6 miles seal coat oiling. (S. of Hester).
236	S 368 (12)	7-1-64	8.7 miles aggregate, plant mix bituminous surfacing & seal coating. (N. of Glasgow).
237	S ?? (?)	5-15-64	7.8 miles, grade, drain, surface, plant mix bituminous & seal coat oiling. (W. E. of Culbertson).
250	S 141 (4)	5-15-64	12.5 miles (1.0 mile grade drain) aggregate & plant mix bituminous surfacing. (Utica to Hobson).
251	S 322 (7)	5-15-64	4.5 miles grade, drain, surface & plant mix bituminous surfacing. (E. of Hardin).
	OFF SYSTEM PROJECTS		
303	M AD 7 (1) *	1/64	8.7 miles grading, drainage & aggregate surfacing. (Brooks E.).
304	FAP 52-2 (1, & FL 59 (1),(2)*	1964	8.7 miles grading, drainage, aggregate & plant mix bituminous surfacing. (U. of Red Lodge).

* - Bureau of Public Roads Projects.
** - Bureau of Public Roads Projects. - Map Index Numbers 138 & 211 one contract.

OPEN HOUSE TERMED HUGE SUCCESS

Over 700 citizens of Fergus County came into Lewistown on March 7 to visit the new District 6 Highway Office and Shop. Each visitor was given a tour of the new building, and the opportunity to have cooffee and cookies, prepared by the wives and gals of the District.

District Engineer Milo Lahn, and Division Engineers Learn and Harcharick were on hand to personally greet everyone, as were the other employees of the district.

A good representation from other areas was also in attendance, with Helena, Missoula, Miles City and Billings being represented.

A buffet dinner and get-together of all Highway employees was held that evening at the Elks Country Club, and nearly 100 were on hand for this festivity.

When a Highway Division was first established at Lewistown, this is the building that was obtained to house the offices and shops. It served its purpose well, until due to the missile road maintenance, and the other additions in new highways, and right of way offices, it rapidly became too small to handle the increase in activity.

The above picture is an aerial view, taken before the snow came, showing the new Lewistown offices and shops.

A HISTORIC WINTER

The winter of 1963-64 might go down in history as mild, for some areas of the state, but to the maintenance men along the east slopes of the Continental Divide, and around the west and north of the Crazy Mountains, and also in the King's Hill area, it will long be remembered.

It seems as if the wind will never stop blowing, and there has been enough snow to cause much drifting and extremely poor visibility. The pavement also seems to retain enough heat so that the snow will stick to it and cause slushiness and icing.

It has been necessary to close Deep Creek Canyon many days, as well as U. S. 89 between White Sulphur Springs and Livingston.

The photo shows two plows working on U. S. 89 in the vicinity of King's Hill, where the snow depth ranges from four to ten feet in depth.

RIGHT-OF-WAY BEING CLEARED

About 200 people attended the public auction, conducted by Bob Saulke, of buildings that must be moved to clear the right-of-way for Interstate 15 in West Great Falls. Ben Briscoe reports that all buildings were suc-

cessfully sold to the satisfaction of the Department, and to the owners. The buildings are to me removed by April 15.

THREE-DAY SEMINAR IN HELENA

About 120 Project Engineers attended a three-day seminar in Helena on March 3, 4 and 5 to bring them up-to-date on latest construction techniques, specifications, department administrative policies, accounting procedures, and latest laboratory techniques.

Held under the supervision of the Training-in-Service Engineer, all instructors were engineers from the Helena headquarters, with outside assistance being given by Norm Baumgart of Portland Cement Association, and Jim Burton of the Asphalt Institute.

These seminars previously have been held in Division offices, but this year, it was felt that the men should be in Helena, so that they could visit the laboratory, and become acquainted with the IBM procedures.

On March 10, 11 and 12 a duplication of the school was run for the benefit of all Instrument men.

REPORT OF VEHICLE ACCIDENTS

Compiled by Clint (Hard-hat) Fulkerson

As a result of many accidents, especially between Oct. 1, 1962 to Sept. 30, 1963, in which MHD vehicles were involved, Fred Quinnell, Jr., State Highway Engineer, requested that an accident review board be established to study all such accidents in which Highway Department vehicles played a part.

The Accident Review Board consists of 4 members in each of the 11 divisions, plus the Helena headquarters office. It is their charge to review all accidents, and make a decision as to whether the operator is guilty of a chargeable accident, or if the mishap is to be considered non-chargeable. Each division has its own review board. One chargeable accident causes the operator to be reprimanded; two such accidents results in time off without pay for the offender, and the third offense leads to dismissal of the employee. An accident remains on the books for a period of three years, after which it is removed.

The tabulations of the accidents in the year indicated above, showed a total of 124, of which 75 or 60% were unchargeable.

Ages seem to play an important part in accidents, as the figures show that of these 124 accidents, 26 happened to the driver between 56-60 years of age. The next age bracket was 36-40 years, with 18 accidents.

50% of all the accidents involving Highway vehicles were rear end collisions, of which only 17 were the fault of the Highway Department driver.

In all, the frequency of accidents per million miles of travel, averaged 8.9. Although the Butte Division reported the largest number of accidents, yet the most miles were driven in that Division, being 1,617,832. Therefore their frequency rate was 12.4. Compared to Kalispell, which had the highest frequency rate of 14.3. This Division had 13 accidents, but the total mileage driven was only 909,606. Estimated total mileage driven by Highway employees, 13,500,000.

Since the inception of the accident review board, there have been no dismissals, and only one temporary suspension without pay.

CLOSING OF HIGHWAYS ORDERED

The Montana Highway Commission has directed the district offices to temporarily close highways when ground blizzards, or other extreme conditions make traveling hazardous, Fred Quinnell, Jr., State Highway Engineer stated recently.

There are times in Montana when blizzard conditions or ground blizzards cause visibility to be limited to the extent that it is dangerous to travel certain areas. When such conditions exist, the District Engineer is to make the decision about closing the affected areas, either by flagmen, or barricade. He, then, is to notify the news media. As soon as travel conditions are safe, the road is to be re-opened to traffic, and the news media again notified.

This decision was made in an attempt to protect the motorists from possible disastrous results of traveling a highway when there is a danger of accident or being stalled.

"The Highway Department is interested in doing all in its power to prevent loss of life and property," Quinnell said. "We feel this is one more method we can employ to accomplish that end."

1806 Tammany
Anaconda, Montana
March 2, 1964

Mr. Calvin Fitzsimmons
District Engineer
Montana State Highway Department
Butte, Montana

Dear Cal:

On Sunday, March 1, on my southbound trip, I had two small children going to Monida, which made it necessary for me to go in there. In going in on the interchange, with the visibility very poor, I negotiated a couple of drifts but ran into a drift that the bus couldn't handle. Finding I was stuck, I started to shovel and within a few minutes was soaking wet from the blowing snow.

A short time later the big V plow from Lima, operated by Don Merrell and Jim Brown, came up behind me. In extremely close quarters they carefully and skillfully plowed around the bus and went on into Monida. They then came back and helped me out of the drift.

I don't think this kind of courtesy and cooperation should go unnoticed. Their act was sincerely appreciated.

Most sincerely,
Mack Samson, Driver
Intermountain Transportation Co.

HIGHWAY BUILDING PROVIDES JOBS

A recent release from the Bureau of Public Roads in the National Highway Users report, quotes Mr. Whitton as stating that highway construction this year will provide employment for 870,000 persons and that the investment of $6.3 billion in highway construction will also provide jobs for an additional 370,000 on-site road and bridge construction. In addition, this work will generate employment for an additional 500,000 persons in off-site jobs in supply, and transportation of highway construction materials and equipment.

In addition to those above connected directly with the contractors, there are another half a million persons employed by Federal, State, and local highway agencies to plan, design, supervise, maintain and operate the country's 3.6 million miles of roads and streets.

CONSTRUCTION UNDER CONTRACT			
1963	MILEAGE	TOTAL $ UNDER CONTRACT	MEN EMPLOYED
JANUARY	363.046	$ 67,843,513.82	97
FEBRUARY	391.021	$ 71,209,944.84	258
MARCH	424.546	$ 74,050,217.44	847
APRIL	455.980	$ 77,696,890.02	1483
MAY	500.163	$ 82,251,628.29	2575
JUNE	482.122	$81,035,094.71	2349
JULY	486.983	$87,942,278.58	2364
AUGUST	551.292	$87,336,006.60	2459
SEPTEMBER	482.057	$83,279,142.89	2103
OCTOBER	470.967	$84,505,356.25	1947
NOVEMBER	465.916	$83,367,615.26	1118
DECEMBER	406.949	$74,411,977.04	382

The accompanying chart, kept up to date by the Montana Highway Department shows the contribution being made to the economy of Montana by the construction of highways.

The mileage being shown is only for actual grading and surfacing, and does not in-

clude seal coating, fencing, or seeding. The total, dollar-wise, reflects the total amount of the contracts under way at the end of each month, and the men employed shows only the men that are employed by the contractor at the end of each month.

"The year 1964 should exceed 1963 in every respect," says Fred Quinnell, Jr., State Highway Engineer, "as we have quite a few major contracts that will be awarded in the near future."

WITH THE DIVISIONS

Havre Division

They say love is grand! We who cannot remember, must ask Edna Larson Hess who was recently married during a winter's vacation in Hawaii. Edna plans to continue working as the "hot" teletype operator for the Havre Division.

Heartiest congratulations are extended to Sam Hatty, IV, son of Project Engineer Samuel Hatty of Havre. During National Boy Scout Week, a special Sunday service was held at Messiah Lutheran Church at which the younger Sam was presented with the Pro Deo et Patria Award. The title of this award, which is the highest given to a Boy Scout by the Lutheran Church, comes from the Latin and means "For God and Country." Sam Senior has been active in Boy Scout leadership for many years and should be commended on the fine example he and his family have set for the Boy Scout movement.

Great Falls

Sick Call: Latest member to join our "Fingerling" group is Arling Buskirk. "Buzz" lost half of his right pointer in an argument with a fan blade.

Following major surgery and several weeks confinement in a local hospital, Mrs. Donna LaFournaise is now recuperating at her home in Great Falls. Latest word is that it will be several more weeks before Donna returns to resume her duties as payroll clerk.

The Center Line
STATE HIGHWAY DEPARTMENT
Helena, Montana
4

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